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A New Species of the Genus *Notosemus* Foerster from Formosa (Hymenoptera : Ichneumonidae)

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Abstract

One new species of *Notosemus*, viz. *N. polyambonios* is described, representing the first species of the genus from Formosa.

Key words : Insecta, Parasitica, Ichneumoninae, *Notosemus*.

Introduction

The genus *Notosemus* Foerster, a small group of the Notosemini belonging to the subfamily Ichneumoninae, has been represented by only three species in the world : *N. bohemani* (Wesmael, 1855) from Europe, *N. rufomaculatus* (Cameron, 1903) from Sri Lanka, and *N. variegatus* (Tosquinet, 1903) from Java. In the course of the present investigation the author has found a new species of the genus in Formosa, which will be described herein. Information of the host association of the genus remains unknown. The holotype of the new species is preserved in the collection of the Entomological Laboratory, Kagoshima University, Kagoshima.

Genus *Notosemus* Foerster

Notosemus Foerster, Verh. naturh. Ver. Rheinlande 25 : 194, 1868. Type-species : *Notosemus dives* Brischke, 1888 (= *Phaeogenes bohemani* Wesmael, 1855).

Ischnogaster Kriechbaumer, Ent. Nachr. 16 : 153, 1890. Name preoccupied by Guérin-Ménéville, 1838. Type-species : *Ischnogaster albibucca* Kriechbaumer, 1890 (= *Phaeogenes bohemani* Wesmael, 1855).

Ischnidium Kriechbaumer, Ent. Nachr. 16 : 351, 1890. New name for *Ischnogaster*.

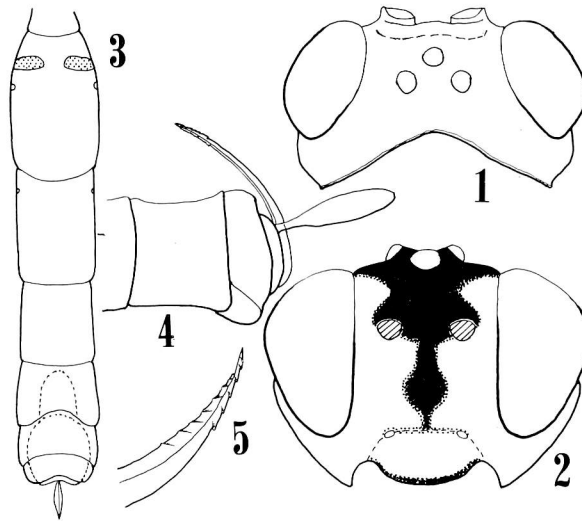
Benecles Cameron, Entomologist 36 : 260, 1903. Type-species : *Benecles rufomaculatus* Cameron, 1903.

The chief distinguishing features of this genus are as followings : —

Body subcylindrical. Head subquadrate and strongly concave posteriorly (Fig.

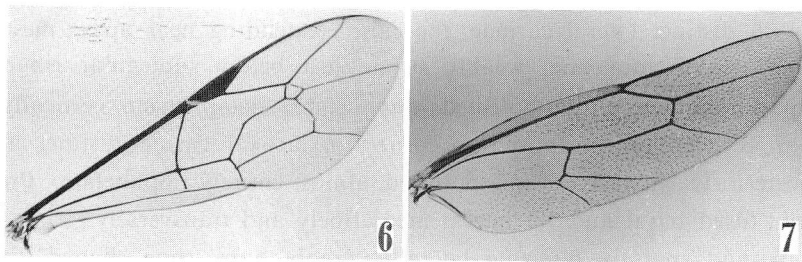
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Figs. 1-5. *Notosemus polyamphonios* sp. nov., ♀.

Fig. 1, Head in dorsal view; 2, Head in frontal view; 3, Abdomen in dorsal view; 4, Apical part of abdomen in lateral view; 5, Apical part of ovipositor.



Figs. 6-7. *Notosemus polyamphonios* sp. nov., ♀.

Figs. 6 & 7, Fore and hind wings.

1); occipital carina strong and complete, meeting genal carina at base of mandible; mandible with two distinct teeth, the upper tooth longer than the lower; apical margin of clypeus thick, evenly arcuate; face rather strongly punctate; frons strongly punctate or coriaceous; scutellum weakly convex, its lateral carina strong and complete, sometimes present at base; notauli at most indistinctly impressed to a third, and only deeply impressed directly behind the anterior margin of mesoscutum; posterior mesosternal carina widely interrupted in front of each middle coxa. Propodeal spiracle subcircular to elongate; base of areola a little separated from base of propodeum. Tarsal claws simple. Wings (Figs. 6 & 7) with 2nd intercubitus present; areolet truncate above; nervulus interstitial. Basal half of 1st abdominal

segment about as wide as deep or deeper than wide, with longitudinal carinae; thyridia very wide, their separation on the middle equal to about half the width of each, and far removed from base of 2nd tergite (Fig. 3); 2nd and subsequent tergites almost parallel-sided (Fig. 3); apical margin of 6th and 7th tergites weakly concave medially (Fig. 3); ovipositor about as long as apical depth of abdomen (Fig. 4).

Notosemus polyambonios sp. nov.

♀. Face polished, rather weakly and moderately densely punctate, about 1.3 times as wide as high at level of lower margin of antennal socket; clypeus weakly and sparsely punctate, about 2.2 times as wide as high, its apex subtruncate medially; malar space $4/7$ as long as basal width of mandible; inner margin of eyes parallel-sided (Fig. 2); temple moderately strongly swollen (Fig. 1), $5/9$ as long as wide in lateral view, virtually bare; distance between lateral ocelli and eyes 1.3 times as long as diameter of an ocellus; frons slightly concave and bare basally, slightly convex and strongly punctate to strongly coriaceous. Antennae 39-segmented; flagellum weakly enlarged apically; 1st flagellar segment about 5.9 times as long as wide at apex and 1.4 times as long as the 2nd; 2nd flagellar segment 1.1 times as long as the 3rd. Pronotum finely and rather densely punctate, with an impunctate area on middorsal portion; epomia weak and short; mesoscutum subpolished, densely and moderately strongly punctate; scutellum slightly convex, polished, very sparsely punctate, with distinct lateral carinae, the carina extending near apex; mesopleurum strongly and densely punctate, weakly striate just below subtegular ribge and in front of speculum; speculum polished, impunctate; metapleurum vertically striate-rugose, with a deep pit on posterior corner; juxtacoxal carina distinct anteriorly, obsolete posteriorly; juxtacoxal area polished, almost entirely impunctate. Propodeum subpolished; fused basal and 1st lateral areas finely and transversely striate medially and strongly and sparsely punctate laterally; areola horse-shoe shaped, finely and longitudinally striate, 1.0 times as long as wide at costula; 2nd lateral area obliquely striate; petiolar area incompletely confluent with 3rd lateral area, and transversely striate; 3rd lateral area rugose; 2nd pleural area obliquely striate; propodeal crest low, but distinct; propodeal spiracle elongate, 2.7 times as long as wide. Venation of wings as in Figs. 6 & 7. Legs slender; hind femur 3.9 times as long as wide in lateral view; middle and hind tibial spurs weakly curved; inner spur of hind tibia 1.2 times as long as the outer one; basitarsus of hind leg 1.0 times as long as 2nd and following segments together except claws. Abdomen with 1st tergite coarsely and very sparsely punctate, 2.2 times as long as wide at apex, with weak but complete dorsolateral carinae; postpetiole mat to weakly coriaceous; 2nd tergite strongly mat, 1.8 times as long as wide at apex; thyridia (Fig. 3) very wide, about 2.0 times as long as space between thyridia and separated from base of 2nd tergite by 2.0 times of its own length; 3rd tergite strongly mat as in the 2nd, $5/7$ as long as the

2nd; 4th and subsequent tergites polished, with very sparse punctures, the apical margin of 5th to 7th tergites slightly concave medially, and the posterodorsal portion widely membranous (Fig. 3); ovipositor (Figs. 4 & 5) upcurved, with 7 oblique ridges on upper valve, 6 on lower valve; ovipositor sheath (Fig. 4) widened apically, 4/5 as long as inner spur of hind tibia.

Black with whitish markings. Head (Fig. 2) whitish yellow; following parts dark brown to black: apical teeth of mandible, apical margin of clypeus, clypeal fovea, median vertical spot of face, frons except for frontal orbit, vertex except for lateral spot, dorsal 1/4 and posterior margin of temple, occiput and postocciput. Antennae infusate, the 8th to 15th flagellar segments except for under side, white. Lower part of pronotum, collar area, posterodorsal part of pronotum, a pair of median triangular spots of mesoscutum, scutellum, except for lateral and apical margins, dark brown, postscutellum, lower corner of mesopleurum, a small spot just below tegula, a large spot of metapleurum and upper division of metapleurum whitish yellow. Propodeum black, with a pair of whitish yellow large markings on 3rd lateral area. Front and middle legs with coxae and trochanters whitish yellow, the 2nd trochanters light yellowish brown; femora, tibiae, and tibial spurs light ferrugineous, the middle tibia a little darker; tarsi fuscous, the basal segments of front tarsus a little paler. Hind leg with coxa black, the basodorsal and apicoventral areas whitish yellow; 1st trochanter whitish yellow, blackish on basodorsal area; 2nd trochanter, femur, and tibial spurs light ferrugineous, the base and apical part fuscous; tarsus whitish yellow, the 1st segment except at extreme apex and 5th segment infusate. Abdominal tergite black; 1st tergite with a small, fulvous median apical spot; base of 2nd tergite and thyridia yellowish brown; 2nd to 4th tergites with an apical yellow band, the apical yellow band of the 4th indistinct medially; lateral sides of 3rd to 5th tergites, apicolateral sides of 5th and 6th tergites, apical margin of 7th tergite, and subgenital plate whitish yellow. Ovipositor fulvous brown; ovipositor sheath infusate. Wings subhyaline.

Length: Body 11.4 mm., forewing 8.3 mm.

♂. Unknown.

Holotype (♀): Hsitsun-Chihtuan, 1,000 m, Taoyuan Hsien, 18-iv-1981, K. Ôhara leg.

Distribution: Formosa.

This species is closely related to the Oriental *N. rufomaculatus* (Cameron, 1903). It can be readily separated from the latter by the base of the 2nd tergite which is not striate, the elongate propodeal spiracle, the scutellum with a strong and complete lateral carina, the subhyaline wings and the whitish yellow palpi. Further, it is also allied to the European *N. bohemani* (Wesmael, 1855), from which it is easily distinguishable by the polished and virtually bare 4th tergite, the 5th to 7th tergites with a dorsal membranous area, respectively, the elongate propodeal spiracle and the face whitish yellow with a fuscous median vertical marking.

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